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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,612	07/27/2001	Dhirubhai Patel	GCD 00.30	8713

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,612

Applicant(s)

PATEL, DHIRUBHAI

Examiner

Peter J Macchiarolo

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 5 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: The first named inventor has not signed where indicated and therefore has not been executed in accordance with either 37 CFR 1.66 or 1.68.

Specification

2. The disclosure is objected to because of the following informalities: First, the instant Specification does not present existing problems with current ring laser gyroscopes, and therefore does not motivate one to make these changes. *See* 37 CFR 1.77(b).

Further, the Background of the Invention lacks a description of related art, including information disclosed under 37 CFR 1.97 and 1.98.

Further, in paragraph [0020], reference number 64 is referred to as both a getter well and a getter. The Examiner is interpreting reference number 64 to indicate a getter well.

Further, the instant Specification fails to describe what feature reference numerals 36 and 38 refer to.

Appropriate correction is required.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show an isotropic view of the getter well in relation to the metalization layer as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 5 and 11 are objected to because of the following informalities: The wording of the claim is unclear. The Examiner is interpreting the claim to read as follows:

“...further comprising a spring retained in the getter well being attached to the getter and aligned with the electrode bore.”

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (USPN 6,422,824) in view of Rabusin (USPN 4,990,828).

In regards to claim 1 and 7, Lee discloses in figure 2, an electrode and getter structure for a gas discharge device that includes a frame (26) having a cavity (20) that contains a gain medium and an electrode bore (36) extending from a surface of the frame to the cavity, comprising, a getter well (44) mounted to the frame around the electrode bore, and a getter (46) mounted in the getter well spaced apart from the frame. Lee further discloses an electrode (48) is adjacent to the electrode bore.

Lee is silent to the electrode being a metalization layer formed on the surface of the frame.

However, it is well known in the art to construct an electrode which can be formed on a frame surface that is capable of electrically connect a getter inside a hermetically sealed well to an outside power source. Rabusin teaches such an electrode in figures 3 and 5. Rabusin teaches getters (302) are electrically connected by electrically conducting tape, and this tape may act as an electrode.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute Rabusin's metal tape for Lee's electrode (48), since it is well known in the art that a hermetically sealed well can be formed on a frame more easily and more successfully using a metalization layer electrode, such as Rabusin's electrically conducting tape, rather than using a wire electrode as recited by Lee. Furthermore, it would have been obvious to construct the apparatus using the method of claim 7, since such a method would be needed to construct the apparatus of claim 1.

In regards to claim 2 and 8, Lee in view of Rabusin teach all of the recited limitations of claims 1 and 7 (above).

Lee and Rabusin are silent to a metalization layer extending around the electrode bore and the getter well being sealed to the metalization layer.

However, it is well known that Rabusin's metal tape can easily be formed around the electrode bore, and this would allow for extremely flexible design parameters when adding a power source. Further, one of ordinary skill can clearly see that Lee's getter well would be sealed to the metalization layer after replacing Lee's electrode (48) with Rabusin's metal tape.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct an electrode and getter structure of claim 1 (above), further comprising the metalization layer extending around the electrode bore, and further, the getter well is sealed to the metalization layer, since it can be clearly seen by one skilled in the art that this configuration is desired so one can have more flexibility when determining the physical location of the power supply, and this allows for a more modular component, which is important

when mass producing the recited configuration. Furthermore, it would have been obvious to construct the apparatus using the method of claim 8, since such a method would be needed to construct the apparatus of claim 2.

In regards to claim 3 and 9, Lee in view of Rabusin teach all of the recited limitations of claim 2 and 8 (above).

Lee and Rabusin are silent to the metalization layer including an electrical contact arranged so that an electrical signal may be applied to the electrode.

However, it is well known in the art that Rabusin's electrical tape has an inherent electrical contact arranged so that an electrical signal may be applied to the electrode.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the electrode and getter structure of claim 2 (above), further wherein the metalization layer includes an electrical contact arranged so that an electrical signal may be applied to the electrode, since it is well known in the art that the getter configuration requires an electrical signal. Furthermore, it would have been obvious to construct the apparatus using the method of claim 9, since such a method would be needed to construct the apparatus of claim 3.

In regards to claim 4 and 10, Lee in view of Rabusin teach all of the recited limitations of claim 1 and 7 (above).

Lee further teaches in column 4 lines 22-24, that the getter well may be a “bell-shaped glass dome.” Lee further teaches in figure 2 that the getter well is sealed to the frame with the electrode there between.

Lee is silent to the getter well being a hollow glass cylinder having a closed end and an open end mounted to the metalization layer.

However, one of ordinary skill in the art can clearly see in figure 2 that Lee’s getter well which may be a “bell-shaped glass dome” is in fact a cylinder with a closed end and an open end mounted to the frame, which is also mounted to the metalization layer (see above rejection to claim 2).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct a getter well according to claim 1 (above), further comprising the getter well being a hollow glass cylinder having a closed end and an open end mounted to the metalization layer, since it is well known in the art that this configuration is easy to manufacture, can withstand the vacuum, and further, is economically viable. Furthermore, it would have been obvious to construct the apparatus using the method of claim 10, since such a method would be needed to construct the apparatus of claim 4.

In regards to claim 5 and 11, Lee in view of Rabusin teach all of the recited limitations of claim 4 and 10 (above).

Lee further teaches in figure 2, the getter (46) is suspended in the cavity by feedthrough electrodes (48).

Lee is silent to the feedthrough electrodes being springs.

However, it is well known that a spring is an elastic device that regains its original shape after being compressed. Further, it is well known that in order for Lee's getter configuration to operate, the feedthrough wires need to operate as springs.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct a getter structure of claim 4 (above), further comprising a spring retained in the getter well, since it can be clearly seen to one of ordinary skill in the art that Lee's feedthrough electrodes must act as springs to properly operate in this configuration. Furthermore, it would have been obvious to construct the apparatus using the method of claim 11, since such a method would be needed to construct the apparatus of claim 5.

In regards to claim 6 and 12, Lee discloses in figure 2, an electrode and getter structure for a gas discharge device that includes a frame (26) having a cavity (20) that contains a gain medium and an electrode bore (56) extending from a surface of the frame to the cavity, comprising; a getter well (44) sealed to the frame, and a spring (48) mounted in the getter well such that the elastic forces in the spring retain it in a selected position, and a getter (46) mounted in the getter well spaced apart from the frame and aligned with the electrode bore. Lee further discloses an electrode (48) that is adjacent to the electrode bore.

Lee is silent to a ring-shaped metalization layer comprising of a ring extending around the electrode bore and having an electrode formed therein and an electrical contact in the metalization layer arranged to extend away from the ring.

It is well known to those skilled in the art that Lee's getter configuration requires an electrical signal to pass into a hermetically sealed getter well via an electrode that allows for

flexibility when deciding where to place the electrical connection to the power supply. Rabusin teaches such a possible electrode configuration in figures 3 and 5. Rabusin teaches getters (302) are electrically connected by electrically conducting tape, and this tape may act as an electrode and metalization layer. It can be seen to those of skill in the art that Rabusin's electrode configuration can easily be shaped into a ring metalization layer formed around the electrode bore and spaced apart therefrom, with an electrode formed in the metalization layer to extend inward to a location adjacent to the electrode bore, and an electrical contact in the metalization layer arranged to extend away from the ring. This configuration will allow for greater flexibility when deciding where to place the electrical connection to the power supply.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lee's getter structure by supplementing a ring-shaped metalization layer comprising a ring extending around the electrode bore and having an electrode formed therein with an electrical contact in the metalization layer arranged to extend away from the ring, since it is well known in the art that this configuration enables Lee's getter structure to be more flexible as stated above, and easier to mass produce. Furthermore, it would have been obvious to construct the apparatus using the method of claim 12, since such a method would be needed to construct the apparatus of claim 6.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Examiner notes that the Applicant's claims are written so broadly, that figures 2

Art Unit: 2875

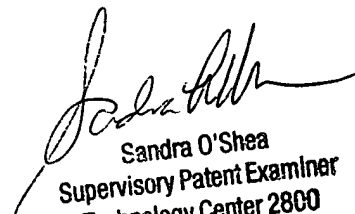
and 6 of Schlitt et al. (USPN 4,495,440) can be interpreted to read on Claims 1, 6, 7, and 12 of the Applicant's instant invention.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198. The examiner can normally be reached on 8 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm
December 24, 2002


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800